

Prevention Training Issues	Prevention Awareness	Prevention Policy Development	Transportation/Facility Prevention Program Management	Community Prevention Program Management	Prevention in Operations	Design and Plans Review	Inspection & Enforcement	Appendix A: Prevention Authorities	Appendix B: Training Mandates	Appendix C: Federal Programs	Appendix D: OSHA 1910.119
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Hazardous Materials

Prevention Training Guidelines

Prevention in Operations

# General Training Considerations

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### Introduction

Prevention in Operations describes the training requirements of persons who supervise or operate processes that involve the storage, transport, handling, manufacture, or use hazardous materials. These employees are responsible for ensuring that hazardous materials prevention activities and safety requirements defined in system/process safety management plans and standard operating guidelines (SOGs) are properly implemented and enforced.

The job requirements and training needs of operations personnel will vary significantly, depending on the size and nature of the operation, the type of hazards involved, the prevention strategy adopted by the facility, and the duties of the employee. However, generic roles and responsibilities can be defined as follows:

- Assist the prevention program manager identify hazardous materials risks, prevention opportunities, and safe operating practices and procedures for specific processes/operations.
- Implement, monitor, and enforce safe working practices and procedures for specific operations.
- Participate in record keeping, reporting, safety reviews, compliance audits, incident investigations, inspections, evaluations, and other prevention program activities.

### Training Audience

The training audience for Prevention in Operations consists of employees of public, private, and non-profit facilities. In this context, the terms “facility” and “process” are broadly defined, specifically to include large and small operations at industrial plants, commercial establishments, trucking and other transport companies, government agencies, health care operations, utilities, and many other types of organizations.

The training audience includes a broad spectrum of facility workers, from supervisors of huge chemical production systems to fork lift operators. Audience members include production managers, shift supervisors, line operators, general laborers, hazardous materials transport employees, and many process-specific job titles.

### Training Requirement

As a prerequisite of training, students are assumed to already know how to carry out their basic work responsibilities. Thus, the goal of training is to promote hazardous materials incident prevention and employee safety by enhancing participants’ ability and motivation to 1) identify and apply safe working practices and procedures on the job, 2) ensure compliance with established prevention program requirements, and 3) contribute as assigned to related program activities (hazard analysis, planning, record keeping, incident critiques, audits, etc.).

A safety management plan and job-specific SOGs, prepared under the direction of the prevention program manager, should exist for all hazardous materials activities. Instruction in Prevention in Operations therefore emphasizes the knowledge and skills students need to apply these established systems and procedures under varying conditions and in a wide range of routine and non-routine work situations. Specifically included is the ability to implement SOGs that define the student’s prevention responsibilities, and to recognize and report potential safety problems.

Training must be highly specific to each student’s needs, which, in turn, depend on their unique job requirements (type of operations, work responsibilities, associated hazards, prevention strategies, etc.). Therefore, instruction emphasizes the transfer of **operations-specific** knowledge and skills that students need to implement the organization’s prevention program and avoid accidents. General training in prevention concepts and techniques is provided as necessary to support this primary goal.

## Training Methodology Recommendations

All students will benefit by awareness-level training in hazardous materials prevention and an understanding of the organization's prevention program. Audience members also need technical knowledge and skills that are specific to their jobs. For this latter type of training, audience members should be grouped to the extent possible by process, hazard, and job type. Training can then be more effectively tailored to the needs of different workers.

Participants should be given opportunities to apply and practice job-specific operating procedures and safety systems under different work conditions and situations. For classroom activities, case studies and scenarios can be used. However, hands-on use of equipment under realistic working conditions and on-the-job training are encouraged. Activities should highlight creative approaches to prevention program requirements and practical solutions to common problems. Drills or exercises under simulated emergency or non-routine situations are also useful.

The scope and duration of training will vary depending on the nature and complexity of related SOGs and safety systems. Checklists, job aids, and other practical tools that can be used at the work site should be included in course materials whenever possible.

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## Recommended Training

### Prevention in Operations

Two types of statements are used to describe training requirements recommended for Prevention in Operations. Terminal objectives identify broad job competencies. Enabling objectives describe instructional competencies that lead to proficiency in the terminal objective. Together, these statements identify generic training needs for all audience members. Hazardous materials training managers are encouraged to refine this material as necessary to clarify the training requirements of different audience groups.

The training objectives presented in the next section are consistent with federal requirements and national standards. Included are FEMA and NRT planning guidelines for communities and facilities, DOT Transportation Regulations, various OSHA worker safety guidelines, EPA requirements, and guidance disseminated by the chemical industry.

PrOPS-1

**Objective Identification Legend**

This is the identification of the objective used in this document. It matches the identification code used in course assessment references. (See the Training Program Management section of this document.) Decimal numbers (such as PrOPS-1.1) indicate enabling objectives supporting the primary objective.

#### Identification

#### Recommended Training Objectives

<b>PrOPS-1</b>	Given an overview of prevention concepts and activities (see <i>Prevention Awareness</i> ), describe employee safety requirements.
<b>PrOPS-1.1</b>	Describe general safety and health provisions protecting worker safety.
<b>PrOPS-1.2</b>	Describe general guidelines for employee participation in hazardous materials prevention activities.
<b>PrOPS-1.3</b>	Describe general guidelines for employee training in workplace safety and health.
<b>PrOPS-1.4</b>	Describe general guidelines for maintaining and accessing process safety information.
<b>PrOPS-2</b>	Given the organization's hazardous materials prevention program, describe elements of the program that affect operations.
<b>PrOPS-2.1</b>	Describe the organization's hazardous materials prevention mission and policies.

<b>PrOPS-2.2</b>	Describe the organization's hazardous materials emergency response capabilities and systems.	Prevention Training Issues
		Prevention Awareness
<b>PrOPS-2.3</b>	Describe components and relevant aspects (policies, activities, roles, etc.) of the organization's hazardous materials prevention program.	Prevention Policy Development
		Transportation/Facility Prevention Program Management
<b>PrOPS-3</b>	Given an operation's hazards assessment and safety plan, describe prevention strategies.	Community Prevention Program Management
<b>PrOPS-3.1</b>	Identify specific hazards and risks associated with the operation.	<b>Prevention in Operations</b>
<b>PrOPS-3.2</b>	Describe and demonstrate the ability to access and use process safety information to enhance prevention.	
<b>PrOPS-3.3</b>	Describe organizational strategies and safe work practices designed to address all identified hazards.	
<b>PrOPS-4</b>	Given an operation's work situation and scenarios, describe and apply standard operating guidelines (SOGs) that relate to safe working practices.	
<b>PrOPS-4.1</b>	Describe the role of SOGs in hazardous materials safety and prevention programs.	Design and Plans Review
<b>PrOPS-4.2</b>	Demonstrate the ability to apply SOGs that define safe operations (e.g., routine and non-routine operating procedures and practices, contractor safety).	Inspection & Enforcement
<b>PrOPS-4.3</b>	Demonstrate the ability to apply SOGs for safety systems (e.g., pre-startup safety reviews, maintenance/mechanical integrity, management of change).	Appendix A: Prevention Authorities
<b>PrOPS-4.4</b>	Demonstrate the ability to apply SOGs for compliance and enforcement activities (e.g., safety inspections and enforcement, compliance safety audits, incident record keeping, reporting, and investigations).	Appendix B: Training Mandates
<b>PrOPS-5</b>	Given the organization's hazardous materials prevention program, participate as assigned in various program activities.	Appendix C: Federal Programs
<b>PrOPS-5.1</b>	Demonstrate the ability to participate as assigned in prevention program analysis and planning activities.	Appendix D: OSHA 1910.119
<b>PrOPS-5.2</b>	Demonstrate the ability to participate as assigned in prevention training activities.	
<b>PrOPS-5.3</b>	Demonstrate the ability to participate as assigned in the design of new or modified facilities, systems, or processes.	
<b>PrOPS-5.4</b>	Demonstrate the ability to participate as assigned in monitoring, evaluating, and continually refining prevention program activities.	

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